APR 2 1985

Honorable John C. Danforth
United States Senate
Washington, DC 20510

Dear Senator Danforth:

This letter is in response to your March 1, 1985, letter to Mr. Lee Thomas concerning the Agency's classification of phosphating processes as electroplating operations. Specifically, concern was expressed that no hazardous waste is generated by these processes.

As way of background, the Agency originally promulgated a rule on May 19, 1980, which listed a number of wastes from electroplating operations as hazardous wastes. These wastes were listed due to the high concentrations of certain toxicants (i.e., cadmium, chromium, nickel, and cyanide) and their ability to migrate from the wastes and enter the environment. This conclusion was supported by data collected by the Agency and placed in the public docket. When these regulations were published on May 19, 1980, the Agency solicited comment on the listings as to their adequacy. In general, very few comments were received; however, several comments were received which indicated that certain processes should not be included in the listing—namely, sulfuric acid anodizing of aluminum, tin plating on carbon steel, zinc plating (segregated basis) on carbon steel, aluminum or zinc-aluminum plating on carbon steel, cleaning/stripping associated with tin, zinc, or aluminum plating on carbon steel, and chemical etching and milling of aluminum. Upon consideration of these comments, several changes were incorporated, and on November 12, 1980, we excluded these processes from the electroplating listing. No such comments were received indicating that phosphating processes were non-hazardous.

You should also be aware that in listing these wastes, we originally used the same definition of "electroplating" as that used by the Office of Water Regulations and Standards (OWRS) for regulations developed under the Clean Water Act. The same industry categories were used since data that was available generally indicated that these wastes were hazardous, except as indicated earlier. As defined by OWRS, the electroplating category included phosphating processes since phosphating is often associated with additional steps used in electroplating (i.e., conversion coating, chromating, etc.).

We are aware that OWRS subsequently has changed its definition of some categories. We are also aware that some types of phosphating processes (as well as other processes) may generate a waste that is non-hazardous. In fact, the Reynolds Metal company, among others, has filed a rulemaking petition of the exclusion of zirconium phosphating wastes. (See enclosure.) Because of the changes by OWRS and due to the rulemaking petition we have received, the Agency has begun to re-evaluate the hazardous wastes listings for electroplating and metal finishing operations.

This re-evaluation will include an examination of the types of phosphating, as well as other processes to determine whether their inclusion in the electroplating category should be continued. Once this investigation is completed, we may propose to modify the hazardous waste listing. However, until this is done, the wastes are regulated under the electroplating category and considered hazardous. It should be noted, however, that if wastes can be demonstrated to be non-hazardous, a mechanism does exist to exclude a specific waste from regulatory control. This petitioning process is described in Part 260.22 of our regulations.

Sincerely,

Jack W. McGraw
Acting Assistant Administrator

The U.S. Environmental Protection Agency has promulgated Rules under Subtitle C of the Resource Conservation and Recovery Act, to regulate hazardous waste management activities (40 CFR 260 through 271).

A waste may be regulated as hazardous, by two different routes of applicability.

1. It may be tested against certain characteristics (e.g., ignitability, corrosivity) and if it meets the criteria, be designated a Characteristically Hazardous Waste.

2. It may meet a listed process definition (e.g., Wastewater treatment sludges from electroplating operations) and therefore be designated as a Listed Hazardous Waste.

The Environmental Protection Agency provided reasons why certain processes were listed. Hazardous constituents expected to be found generated by such processes were listed in a appendix to the original Rulemaking.[1] For the listed process named above, designated as waste no. F006, the constituents listed were cadmium, chromium, nickel, and cyanide. Additionally, development documents and background listing documents provided some discussion of the industrial process, at least EPA's concept of that process, and some expected levels of hazardous constituents which might be encountered.

With the above listed waste process, the background listing document [2] provides a definition of applicability, i.e., who is an “electroplater.”

> "Electroplating, as defined in this document, includes a wide range of production processes which utilize a 'large number of raw materials. Production processes include common and precious metals electroplating, anodizing, chemical conversion coating (i.e., coloring, chromating, phosphating and immersion plating), electroless plating, chemical etching and milling and printed circuit board manufacturing."

With the exception of the phosphating operation, virtually all of the categories of unit operations can be visualized as being likely to produce wastewaters or sludges, relatively high in the hazardous constituents listed in the Appendix VII referenced above. [1] Chromating for example, should obviously produce wastes high in chromium. Coloring most commonly uses chromium or cadmium solutions, with predictable results in the generated wastes. But phosphating uses dilute solutions of phosphoric acid and/or its salts, such as sodium tripolyphosphate (a major ingredient in detergents), or other sodium, potassium, or iron phosphates. Again, from the background listing document,

[1]"Chemical conversion coating processes apply a coating to the previously deposited metal or basis metal for increased corrosion protecti6n, lubricity, preparation of the surface for' additional coatings or formulation of a special surface appearance. This manufacturing operation includes chromating, phosphating, metal coloring, and immersion plating... Phosphate conversion coatings produce a mildly protective layer of insoluble crystalline phosphate on the surface of a metal. Phosphate coatings are used to provide a good base for paints and other inorganic coatings, to condition the surfaces for cold forming operations by providing a base for drawing compounds and lubricants, and to impart corrosion resistance to the metal surface by the coating itself or by providing a suitable base for rust preventive oils or waxes. Phosphate conversion coatings are formed by the immersion of iron, steel, or zinc plated steel in a dilute solution of phosphoric acid plus other reagents."

If phosphating is carried out on mild steel (non-alloy) as is the normal operation in the majority of small to medium sized plants, there simply will be none of the hazardous constituents for which reason the overall defined waste process was listed.

A very large number of small and medium sized businesses are adversely effected by this arbitrary designation; and are faced with having to handle a waste, similar in characteristics to dilute detergent, as a hazardous waste, at a very significant cost. Further, It usurps space in secure, hazardous waste disposal facilities, that should be utilized by truely hazardous wastes.

It is a gross misappropriation of both natural and financial resources.

This misappropriation is carried to ridiculous extent, as the E P A is now seeking to establish a precedent through an enforcement action, initiated by the Missouri Department of Natural Resources. A small industry (total employment between 40 and 50) located in Lebanon, Missouri, has performed a phosphating operation as a paint preparation step, and prior to the availability of municipal sanitary sewers, discharged rinse waters and some spent phosphate solutions to a wastewater lagoon, a scenario which is repeated throughout the State of Missouri and the entire Midwest section of the country. Since portions of these materials have remained in the lagoon or surface impoundment for several years (any time period longer than 90 days would suffice) the regulatory agencies, according to the letter of the Regulations (disregarding the intent of the Law) have defined and designated the surface impoundment as a hazardous waste storage and/or disposal facility. Since the company has neither a permit nor interim status to operate such a facility, they have been given an order to "close" the facility. This is not totally equivalent to closing the plant, but the cost for closing the "facility" portion of the operation, under the strict interpretation of the Regulations difining closure, i.e.,

Formal Plan for Closure (must be approved)
Removal of all Hazardous Wastes, Hazardous Waste Constituents, and Residues

Disposal in a Secure Hazardous Waste Management Facility

Decontamination of the Site and Equipment (and Personnel If applicable)

Site Reclaimation

Prepardness and Prevention Planning Documents

Hazardous Waste Contingency Plan and Emergency Procedures Documents

Certified Personnel Training

Waste Analysis Plan

Groundwater Monitoring Plan- Implementation generally entails at least Four Monitoring Wells, at least Three Downslope and One Upslope, Including a substantial required analytical program.

Security Fencing or equivalent restricted access

Installation of an Internal Communications System

Demonstration of Financial Responsibility, Including a Closure Trust Fund or equivalent, Sufficient to cover the costs of closure, a Post-Closure Trust Fund, sufficient to cover as much as Thirty Years of Post-Closure Care, or equivalent financial demonstration, and Liability Insurance, for both Sudden Accidental Occurrances and Nonsudden Accidental Occurrances with respective face coverage of at least $ 1 millIon per occurrance and at least $ 2 million annual aggregate, for the Sudden Occurrence aspect of the requirement, and at least $ 3 million per occurrance and at least $ 6 million annual aggregate for the Nonsudden.

All of these requirements begin to add up rather quickly. Depending upon the extent to which excavation past the "hazardous" waste will be required, we can offer a guess as to the range of costs, and anticipate that the total bottom line figure may exceed $ 200,000.00.

And again, this industry is typical of literally hundreds just like it.

Add to this burden, the almost prurient interest on the part of the Environmental Protection Agency in this particular case (test case precedent) to exact penalties. The letter of the Regulations (not Intent) says that this situation constitutes land disposal of a hazardous waste$_9$ a Severe Class I Violation. The agency" is reportedly looking at penalties in the $ 25,000.00 to $ 50,000.00 range.

And for something for which absolutely no hazard exists.

During the public comment period, following the original proposal of the bulk of the hazardous waste management Regulations, several comments were received by the E'PA. 'The agency's response to one commenter who objected to the inclusion of wastes from chemical conversion coating operations, provides the basis for several conclusions as to the validity and completeness of EPA's study.

"The Agency disagrees with the commenter. Although the listing background document does not provide a specific discussion on chemical conversion coating operation's and includes, only limited data on the composition and concentrations of the toxic constituents in these sludges, data contained in the references to the background document fully support the listing of sludges from chemical conversion coating operations. For example, in the Agency's Development Document for Existing Source Pretreatment Standards for the Electroplating Point Source Category, effluent streams from forty-six coatings plants were sampled and analyzed for a number of compounds including cyanide and chromium. The results of this sampling effort are presented below:

Composition of Raw Waste *Streams from Coatings Process ('mg/'l)*

Compound	*Concentration*
Cr (Total)	.19 - 79.2
Cyanide	.005 - 126.0

As is indicated, these toxic compounds are present in the raw wastewater, thus can be expected to be found in the treatment sludges at much higher concentrations[1] after implementation of the electroplating pretreatment standards. The Agency believes that these sludges are no different (i.e., would contain toxic metals and complex cyanides in significant concentrations) than other electroplating sludges which have been shown to leach. Additionally, it should be pointed out that conversion coating processes are usually associated with electroplating operations and, thus, wastes from conversion coating operations are most likely to be combined with those of other metal finishing operations of similar waste characteristics and treated in a single treatment plant. Therefore, the Agency will continue to include the general category of chemical conversion coating operations in the electroplating category, so that these process sludges will continue to be listed as hazardous wastes." (Emphasis added)

From the above material, we can conclude the following:

* EPA's original study was not sufficient in scope or duration.
* EPA admits that, "...the listing background document includes only limited data on the composition and concentrations of toxic constituents in (chemical conversion coating) sludges..."
* EPA then suggests that, "...data contained in the references...ful1y. supporting the listing..." and they cite the example of characterizing effluents of forty-six coatings plants.
* EPA fails to specify which of the four (4) types of coatings plants were sampled.
* EPA fails to specify whether or not the analyses differed, assuming that samples were actually taken from each of the four representative types (i.e., coloring, chromating, phosphating, and immersion plating).

* E P A fails to specify whether or not "other" regulated processes such as electroplating operations, were associated with the coating operations, and combined waste streams characterized (as they presume is the general case).

E P A states that presumption as, "... conversion coating processes are usually associated with electroplating operations...(with). . similar waste characteristics..." (i.e., they occur together in the same plant and produce comparable waste streams).

This presumption may be valid for only the largest of industries, and even for that size of operation, survey evidence does not suggest that it is so.

For small to medium sized operations, the presumption is clearly ridiculous.

A very large number of plants exist which only employ a phosphating step as a paint preparation stage, and use no "other" regulated process. The EPA assumed that no great financial impact would result on this category of operation, because of their presumption that coating operations generally were performed with "other" electroplating processes.

A great financial impact is apparent, and immediate relief is desparately needed to eliminate this misappropriation of resources.

1. Appendix VII to 40 CFR" Part 261, 45 FR No. 98, Monday, May 19, 1980, p. 33131 - 2.

Background Listing Document, Electroplating and Metal Finishing Operations, U.S. Environmental Protection Agency (Not Dated)

March 1, 1985

The Honorable Lee Thomas
Administrator
Environmenta1 Protection Agency
401 M Street, S.W.
Washington, D. C. 20460

Dear Mr. Thomas:

I recently received a complaint from a constiituent about the application of certain RCRA regulations to small and medium sized businesses that perform a phosphating operation as a paint preparation step. An outline of the concern is enclosed; essentially, the point is made that non hazardous waste is generated by such an operation, and coverage by RCRA regulation would be financially onerous.

I would appreciate your review of this material and your comments on its merits.

Sincerely,

John C. Danforth

Enclosure